

Notice of Allowability

Application No.

10/605,987

Examiner

Porfirio Nazario-Gonzalez

Applicant(s)

TRUSOV, SERGEJS

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1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-11.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Ralph D. Chabot on July 20, 2005.

The application has been amended as follows:

In the claims:

Please amend the claims as follows:

- ~~101~~ 1. A method for producing a metal chelate comprising the steps of:
- providing a sufficient amount of at least one amino component;
 - providing a sufficient amount of at least one sugar component;
 - providing a sufficient amount of at least one metal component; and,
 - mixing said sufficient amounts of said amino component, sugar component, and metal salt component with water for a sufficient time and at a sufficient temperature to form a soluble metal chelate containing solution.
- ~~102~~ 2. The method of claim 1 further comprising the steps of evaporating the soluble metal chelate containing solution; thereafter drying to form a dried metal chelate; and, milling to form a powder of dried metal chelate.
- ~~103~~ 3. The method of claim 1 where:
- said amino component is selected from the group consisting of glycine, lysine, glutamic and other amino acids, dipeptides, polypeptides, protein hydrolyzates, milk solids, cream, egg solids, gelatin, and whey pro-

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teins;

said sugar component is selected from the group consisting of glucose, sucrose, mono- and disaccharides, dextrose, high fructose corn syrup, starches, maltodextrins; and,

said metal component is selected from the group consisting of salts, hydroxides and oxides of calcium, manganese, magnesium, copper, zinc, cobalt, chromium, potassium, and iron.

~~{4}~~ 4. The method of claim 2 where:

said amino component is selected from the group consisting of glycine, lysine, glutamic and other amino acids, dipeptides, polypeptides, protein hydrolyzates, milk solids, cream, egg solids, gelatin, and whey proteins;

said sugar component is selected from the group consisting of glucose, sucrose, mono- and disaccharides, dextrose, high fructose corn syrup, starches, maltodextrins; and,

said metal component is selected from the group consisting of salts, hydroxides and oxides of calcium, manganese, magnesium, copper, zinc, cobalt, chromium, potassium, and iron.

~~{5}~~ 5. A method for producing a metal chelate comprising the steps of:

➤ providing a sufficient amount of at least one amino component;
providing a sufficient amount of at least one sugar component;
providing a sufficient amount of at least one metal component;
providing a sufficient amount of at least one oxidizing compound; and,
mixing said sufficient amounts of amino component, sugar component, oxidizing compound and metal component with water for a sufficient time and temperature so that said sugar present is substantially oxidized thereby forming metal chelates in a soluble metal chelate containing solution.

~~66~~ 6. The method of claim 5 further comprising the steps of evaporating the soluble metal chelate containing solution; thereafter drying to form a dried metal chelate; and, milling to form a powder of dried metal chelate.

~~67~~ 7. The method of claim 5 where:
said amino component is selected from the group consisting of glycine, lysine, glutamic and other amino acids, dipeptides, polypeptides, protein hydrolyzates, milk solids, cream, egg solids, gelatin, and whey proteins;
said sugar component is selected from the group con-

sisting of glucose, sucrose, mono- and disaccharides, dextrose, high fructose corn syrup, starches, maltodextrins;

said metal component is selected from the group consisting of salts, hydroxides and oxides of calcium, manganese, magnesium, copper, zinc, cobalt, chromium, potassium, and iron; and,

said oxidizing compound is selected from the group consisting of hydrogen peroxide, hypochlorides, peroxides, air, and oxygen.

~~108~~ 8. The method of claim 6 where:

said amino component is selected from the group consisting of glycine, lysine, glutamic and other amino acids, dipeptides, polypeptides, protein hydrolyzates, milk solids, cream, egg solids, gelatin, and whey proteins;

said sugar component is selected from the group consisting of glucose, sucrose, mono- and disaccharides, dextrose, high fructose corn syrup, starches, maltodextrins;

said metal component is selected from the group consisting of salts, hydroxides and oxides of calcium, manganese, magnesium, copper, zinc, cobalt, chromium, potassium, and iron; and,

said oxidizing compound is selected from the group

consisting of hydrogen peroxide, hypochlorides, per-
odites, air, and oxygen.

~~100~~ 9. A method for producing a metal chelate comprising the
steps of:

providing an amino component selected from the group
consisting of: glycine, lysine, glutamic and other amino
acids, dipeptides, polypeptides, protein hydrolizates,
milk solids, cream, egg solids, gelatin, and whey pro-
teins;

providing a sugar component selected from the group
consisting of: glucose, sucrose, mono- and disaccha-
rides, dextrose, high fructose corn syrup, starches, mal-
todextrins;

providing a metal component selected from the group
consisting of salts, hydroxides and oxides of calcium,
manganese, magnesium, copper, zinc, cobalt, chromium,
potassium, and iron;

combining said amino component and said sugar com-
ponent in water to form a solution and mix at atmo-
spheric pressure for a sufficient time and temperature to
form a solubilized Maillard Reaction Product solution;
thereafter, adding said metal component to said Maillard
Reaction Product solution and mix at atmospheric pres-
sure for a sufficient time and temperature to form a sol-
ubilized metal chelate solution; and,

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evaporating said solubilized metal chelate solution to yield a metal chelate, drying said metal chelate to form a dried metal chelate; and, milling to form a metal chelate powder.

~~10~~10. The method of claim 9 where a sufficient amount of an oxidizing compound is added to said solution containing said amino component and said sugar component to form a solubilized Maillard Reaction Product solution.

~~11~~11. The method of claim 10 where said oxidizing compound is selected from the group consisting of hydrogen peroxide, hypochlorides, periodites, air, and oxygen.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance:

The instant claims are novel and unobvious over the prior art of record. The prior art teaches methods of preparing a metal chelate where a metal compound is reacted with an amino acid compound or derivative thereof to form the metal chelate. The prior art does not teaches or discloses the reaction of an amino compound , a sugar and a metal compound, or, an amino compound, a sugar, an oxidizing compound and a metal compound to form a metal chelate.

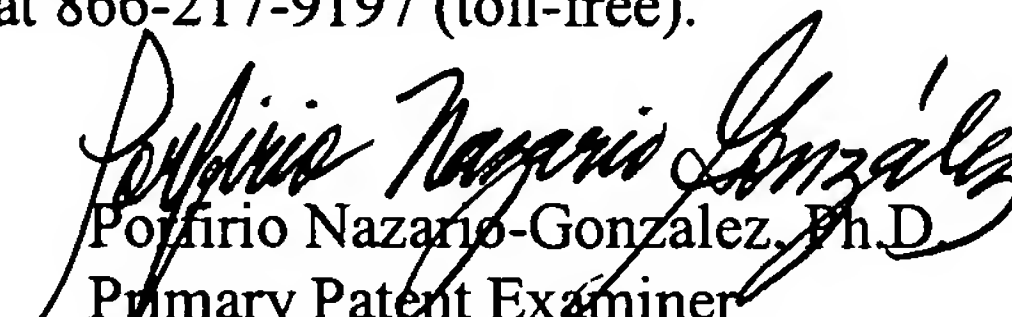
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Porfirio Nazario-Gonzalez whose telephone number is 571-272-0641. The examiner can normally be reached on Mon.-Fri. (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Porfirio Nazario-Gonzalez, Ph.D.
Primary Patent Examiner
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PNG
July 20, 2005